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EXAMINER	
RASHID, DAVID	

ART UNIT	PAPER NUMBER
2624	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/622,144	WIEDEMANN ET AL.	
	Examiner	Art Unit	
	DAVID P. RASHID	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 January 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9 and 50-64* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9 and 50-64* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Table of Contents

Amendment & Claim Status

[1] This office action is responsive to Amendment received on Jan. 21, 2009. Claims 1-9 and 50-64 pending; claims 53-64 new.

Response to Arguments

Remarks Unpersuasive regarding Rejections Under 35 U.S.C. § 101

> Claim 1 recites that an image represents a scene, which is a physical and tangible object. Accordingly, data constituting the image is data representing the specific physical objects of the scene. Claim 1 also recites transforming the image at the first resolution to an image at a second resolution. Consequently, data constituting the image representing a physical object is transformed.

Applicant's Remarks at 12.

Remarks filed Jan. 21, 2009 with respect to the § 101 rejections of claims 1-9 and 50-56 have been respectfully and fully considered, and not found persuasive. A "scene" as used in the claim language may or may not be a physical object, as claim 1 makes no suggestion that such a "scene" must be physical. In addition, even if scene depicted in the image represents one that is physical (e.g., an image of a chair), the image of such a chair my not have been an actual

physical chair (i.e., a picture of an actual physical chair was taken, and that being the one used in image form having been transformed from a physical representation to image representation).

Remarks now Moot regarding Rejections Under 35 U.S.C. § 103

> ...
>
> Therefore, no obvious combination of Bonneau, Hsu and Eppler would result in the subject matter of claim 1, since Bonneau, Hsu and Eppler, either individually or in combination, do not disclose or suggest all the recited features of claim 1.
>
> Dependent claims 2-9, 50-56 and 58-64 recite further distinguishing features over the applied references. The foregoing explanation of the patentability of independent claims 1 and 57 is sufficiently clear such that it is believed that separately arguing the patentability of the dependent claims is unnecessary at this time. However, Applicants reserve the right to do so if it becomes appropriate.

Applicant's Remarks at 12-16.

Remarks with respect to the § 102 rejections are now considered moot in view of the new grounds of rejections of Hsu.

Remarks now Moot regarding Rejections Under 35 U.S.C. § 102

> ...
>
> Accordingly, for at least the foregoing reasons, Applicants respectfully submit that Bonneau does not disclose or suggest all the recited features of claim 1. New claim 57 recites operations similar to the (1) selecting and (2) processing steps of claim 1. Therefore, Applicants respectfully submit that Bonneau also does not disclose or suggest all the recited features of claim 57.
>
> Therefore, Applicants respectfully submits that claims 1 and 57 are patentable over Bonneau, since Bonneau does not disclose or suggest all the recited features of claims 1 and 57.

Applicant's Remarks at 16-17.

Remarks with respect to the § 103 rejections are now considered moot in view of the new grounds of rejections of Hsu.

Claim Rejections - 35 U.S.C. § 112

[2] In response to the Amendments to the Claims received on Jan. 21, 2009, the previous § 112 rejections are withdrawn.

[3] The following is a quotation of the second paragraph of 35 U.S.C. § 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Failure to Particularly Point Out and Distinctly Claim

[4] **Claims 2-3, 8-9, 52,** and **59-60** are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2 and 59 cite "the second resolution being higher than the second resolution", but the second resolution cannot be higher than itself. In addition if the third resolution was to be involved, it is unclear whether the second resolution is higher than the third resolution, or if the third resolution is higher than the second resolution. Claims 3, 8-9, 52 and 60 are rejected by dependency.

Claim Rejections - 35 U.S.C. § 101

[5] 35 U.S.C. § 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

In Re Bilski – "Tied To" Criteria and/or Qualifying "Transformation"

[6] **Claims 1-9** and **50-56** are rejected under 35 U.S.C. § 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent[1] and recent Federal Circuit decisions[2] indicate that a statutory "process" under 35 U.S.C. § 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim(s) recite a series of steps or acts to be performed, the claim(s) neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process.

With regard to (1) above, a process must have either a meaningful tie to an "apparatus", or "machine", or the process must perform a qualifying transformation. Insignificant pre- or post-solution activity involving an "apparatus" or "machine" is not a meaningful tie. For example, claim 1 recites "receiving an image with a first resolution" which does not involve a

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[1] *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

[2] *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

machine to consider whether the machine is significant to the inventive concept (and not pre- or -post processing, or intended use statements). In addition, when such machine is introduced and significant to the inventive concept, it must be a particular machine (e.g., a "processor", not a "machine").

With regard to (2) above, the images in claim 1 do not represent a physical object. "[T]he image representing a scene" may be pixel values creating what is regarded as "a scene", but not an actual physical "scene" that has been transformed prior to.

Claims 2-9 and 50-56 are rejected for failing to alleviate the rejection of their respective dependents.

Claim Rejections - 35 U.S.C. § 102

[7] The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Hsu

[8] **Claims 1, 6-7, 50-51, 54-58,** and **61-64** are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,404,920 (issued Jun. 11, 2002; hereinafter "Hsu").

Regarding **claim 1**, *Hsu* discloses a method (fig. 8a) for identifying objects ("Edge-based Features" at item 120, fig. 8a) in an image (fig. 8a, item 100) comprising:

receiving an image (fig. 8a, item 100) with a first resolution (fig. 8a, item 100 is of a resolution), the image representing a scene (18:64-19:2);

transforming the image at the first resolution (fig. 8a, item 100 is of a resolution) to an image at a second resolution ("Transform by Down-sampling" at fig. 8a, and though upscaled (e.g., item 106) the upscaled image of the larger size equal to the original has the same downsampled resolution), the first resolution being higher than the second resolution;

processing the image at the second resolution (e.g., fig. 8a, item 114) to identify an object (the self-calibrated edge pixels from output 3 at fig. 8a compose "an object"; the identified edges in the "edge-based images" at 14:11-12) in the image at the second resolution;

selecting a detection algorithm (e.g., if the edges create a "region", and if "two or more individual regions are separated by a short distance", then they are joined at 14:30-36) from among plural detection algorithms (14:15-58) based on a condition (that the edges create a "region", the contours of an object) associated with the object (the self-calibrated edge pixels from output 3 at fig. 8a compose "an object"; the identified edges in the "edge-based images" at 14:11-12) identified at the second resolution; and

processing the image (fig. 8a, item 100) at the first resolution (fig. 8a, item 100 is of a resolution) using the object (the self-calibrated edge pixels from output 3 at fig. 8a compose "an object"; the identified edges in the "edge-based images" at 14:11-12) identified at the second resolution to identify another object in the image at the first resolution ("[t]he expanded images [e.g., item 114] can then be integrated, step 120, to create or define the common edge or edges in the original image" at 19:28-35; the common edge or edges in the original image being the "another object" identified) according to the selected detection algorithm.

Regarding **claim 6**, *Hsu* discloses further comprising:

determining whether the object (the self-calibrated edge pixels from output 3 at fig. 8a compose "an object"; the identified edges in the "edge-based images" at 14:11-12) and the another object (the common edge or edges in the original image being the "another object" identified) are desired objects based upon a context (the context being that objects present in either of the images must be surrounded by edges) associated with at least one of the image at the first resolution and the image at the second resolution.

Regarding **claim 7**, *Hsu* discloses wherein the object (the self-calibrated edge pixels from output 3 at fig. 8a compose "an object"; the identified edges in the "edge-based images" at 14:11-12) is a river (14:44-55 suggests the edge pixels may be those of a river).

Regarding **claim 50**, *Hsu* discloses wherein the detection algorithm for identifying the other object (the common edge or edges in the original image being the "another object" identified) at the first resolution is automatically selected from among the plural detection algorithms (14:15-58).

Regarding **claim 51**, *Hsu* discloses wherein the plural detection algorithms (14:15-58) include at least two algorithms respectively corresponding to gray level co-occurrence identification, linear object identification, primitive extraction identification, cloud masking, river masking, activity detection identification, edge extraction identification, gradient magnitude thresholding, busy mask identification, gradient direction edge thinning, line extraction identification, segmentation (14:41-44), region merging (14:34-40), collinear line identification, parallel line identification, parallel edge identification, intensity valuation identification, intensity variance identification, small object detection, morphological filtering, structure detection, lines of communication detection, and contextual line reasoning.

Regarding **claim 54**, *Hsu* discloses wherein the receiving of the image includes receiving the image at the first resolution from at least one of an imaging device (e.g., "LANDSAT and SPOT satellite imagery" at 6:1) and a photographic device.

Regarding **claim 55**, *Hsu* discloses wherein the condition (that the edges create a "region", the contours of an object) associate with the object (the self-calibrated edge pixels from output 3 at fig. 8a compose "an object"; the identified edges in the "edge-based images" at 14:11-12) identified at the second resolution includes at least one of a geographic location, a terrain type (14:44-55 suggests the edge pixels may be those of a river), a ground sample distance, weather, a time of day (an image at night would not contain any detected edges), temperature, a viewing condition, a band frequency of a sensor, a degree of freedom of the sensor, a viewing angle of the sensor, and a positional vector.

Regarding **claim 56**, *Hsu* discloses displaying at least one of the object identified at the second resolution and the another object identified at the first resolution on a display device (6:5-10; e.g. fig. 2).

Beauregard claims

Regarding **claim 57**, claim 1 recites identical features as in the computer-readable recording medium (fig. 6, item 14) having a computer program (6:63-7:4) recorded thereon that causes a computer to identify objects ("Edge-based Features" at item 120, fig. 8a) in an image (fig. 8a, item 100), the program causing a computer to perform operations as in claim 57. Thus, references/arguments equivalent to those presented above for claim 1 are equally applicable to claim 57.

Regarding **claim 58**, claim 55 recites identical features as in the computer-readable recording medium (fig. 6, item 14) as in claim 58. Thus, references/arguments equivalent to those presented above for claim 55 are equally applicable to claim 58.

Regarding **claim 59**, claim 2 recites identical features as in the computer-readable recording medium (fig. 6, item 14) as in claim 59. Thus, references/arguments equivalent to those presented above for claim 2 are equally applicable to claim 59.

Regarding **claim 61**, claim 51 recites identical features as in the computer-readable recording medium (fig. 6, item 14) as in claim 61. Thus, references/arguments equivalent to those presented above for claim 51 are equally applicable to claim 61.

Regarding **claim 62**, claim 53 recites identical features as in the computer-readable recording medium (fig. 6, item 14) as in claim 62. Thus, references/arguments equivalent to those presented above for claim 53 are equally applicable to claim 62.

Regarding **claim 63**, claim 6 recites identical features as in the computer-readable recording medium (fig. 6, item 14) as in claim 63. Thus, references/arguments equivalent to those presented above for claim 6 are equally applicable to claim 63.

Regarding **claim 64**, claim 56 recites identical features as in the computer-readable recording medium (fig. 6, item 14) as in claim 64. Thus, references/arguments equivalent to those presented above for claim 56 are equally applicable to claim 64.

Allowable Subject Matter

[9] **Claims 4-5** and **53** would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. § 101, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

Citation of Pertinent Prior Art

[10] The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 5550937 A; US 5612901 A; US 6084989 A; US 6240369 B1; US 6404923 B1.

[11] Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 C.F.R. § 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

[12] Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID P. RASHID whose telephone number is (571)270-1578 and fax number (571)270-2578. The examiner can normally be reached Monday - Friday 7:30 - 17:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David P. Rashid/
Examiner, Art Unit 2624

/Bhavesh M Mehta/
Supervisory Patent Examiner, Art Unit 2624

David P Rashid
Examiner
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